INDEXED

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IN THIS ISSUE

America and the Next War
The Great Commercial Struggle for Mastery of the Remaining World's Dye Markets Finds the United States Prepared

The Licensing System for Dyestuffs
By E. H. Killheffer

The Application of Alizarine
By Dr. Louis J. Matos

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DYESTUFFS, COLORS and ALLIED CHEMICALS

"Circulated Everywhere Dyestuffs are Used"

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AMERICA AND THE NEXT WAR

The Lesson of Mental Alertness, with Regard to World Events, Will Find Striking Application in Future Distribution of U. S. Dyes

LIKE the arteries which supply blood to various parts of the human body are the coal-tar chemical manufacturing establishments to the world's dye industry; like a tourniquet the Great War shut off the flow of badly needed material which was wont to issue from these establishments, so that just as would be the case with the body, the industry became weak, debilitated, and before relief finally was brought about, well-nigh atrophied.

This was a state of affairs which the world well remembers, and which it will continue to remember for many years to come. Such happenings do not fade readily from the memories of those affected by them, and there were few people in civilized countries who did not experience, in greater or less degree, the discomforts attendant upon an acute shortage of dyestuffs, medicinals, photographic chemicals and numerous other substances employed in the arts and in the sciences, as well as for business purposes and personal adornment.

But unlike the human body, the dye industry of the world could grow new arteries to take the place of those which were bound up. This is exactly what happened. Coal-tar chemical plants, born of stern necessity, sprang up and reached enormous production where none had been before. In the case of Switzerland, the neutral, a flourishing dye industry was greatly enlarged and expanded. England, France and the United States—and particularly the first and last named—were compelled to work prodigiously at the making of modern explosives, which is equivalent to building up the ability and means for the manufacture of coal-tar dyes, and in addition set about creating yet other factories for the making of dyes alone. Japan, Sweden and Italy likewise each attempted to do something to alleviate the coal-tar chemical shortage which faced the world so suddenly.

Because it was further removed from the actual scene of conflict, and because of its almost limitless resources and ability for organization, the United States made stupendous strides in the production of synthetic dyestuffs. Mil-

lions of dollars were and are now being expended in a successful effort to place this nation second to none in the dye field, and, despite many reports which some persist in circulating to the effect that it will be quite out of the question for any chemists other than German chemists to accomplish the production of the much needed vat colors, a few months more will see the first of an ever-increasing output of these. By way of illustrating the determination with which the problem is being attacked, it might be mentioned that one large company has expended nearly $2,000,000 in experimental work directed toward the preparation of vat dyes alone.

Such things take time, however, as is well known to all who have had anything to do with this business. Indeed, it is hardly necessary to state that there is a wide gap between the laboratory production of anything so complicated as one of the vat colors, and the commercial manufacture of identically the same substance. Yet there has been no faltering on the part of our dye makers. In one case a manufacturer spent $945,000 in a single year in developing the factory process of a certain dye. The laboratory small-scale production had been successfully accomplished, yet, owing to the multitude of delicate adjustments and alterations of minute details of the process inseparable from the transfer of operations to commercial size it had, up to a short while ago, been able to send forth only $30,000 worth of the dye.

But the victory can never be definitely decided in the early stages of a race, and the next year or two will tell a far different story—the story of the triumph of persistence, energy and technical shrewdness combined with a real genius for the mobilization of great forces upon short notice which is characteristic of business men of the United States. Already this country has succeeded in providing most of the dyes required by her many industries, and before long she will be in a position to take care of the needs of all who require colors.

As the result, then, of the activities of all the countries referred to, the world's sources of dyes have been more than doubled during the last four years. The original sources being choked off, or their products diverted along other channels, enough new sources were created during the interim to take their places. Now, with the ending of the Great War, the tourniquet has been removed and in the shriveled, almost lifeless arteries of the dye industry the rich blood again courses through, and these, in addition to the newly grown members, place the world in a position as regards its supply of coal-tar products which it has never enjoyed before. Soon there will be almost an oversupply, and then—then will come the Next War.

Bernhardi's sensational book, "Germany and the Next War," evoked many and varied sentiments when it first appeared. Particularly was this true in England, where thinly veiled suspicion and even downright apprehension over Germany's military potentialities had been rife in certain quarters for years. The actual precipitation of the mighty cataract of blood which poured over Europe found England but little better prepared than the United States, as regards men and munitions, but infinitely better prepared as regards mental attitude. The English had been weighing their chances against Germany for so long, and had carried about with them the idea of a finish fight so much as a matter of course, that when the dogs of war were at last unleashed they said to one another: "It has come," and were at once thoroughly awake to the full significance of affairs. The United States, on the other hand, never entertained the belief that some day she would be called upon to do battle with Teutonic forces, and clung so persistently to the delusion that it could never come, that despite the establishing of new records in mobilization of men and materials, much valuable time was wasted and the struggle was prolonged by months.

The United States has learned a valuable lesson. In a sense she has awak-

ened to the fact that from now on her part in the affairs of the world will be considerably less passive than it was before. Never again will she be caught in a condition of dependency upon any foreign source for necessities. The lesson was, perhaps, needed for the safety of future generations; terrible though it was, it was not given in vain. It has sunk deeply into the marrow of people in all walks of life, so that the alertness which heretofore had been applied principally to domestic affairs only, has become broadened until it now functions in harmony with world events. It has been in many ways a healthful thing, for the exhibition of strength given by the United States during the war, both in military affairs and in aiding the unfortunate, has restored that nation to its rightful position of a leader among world forces in the minds of many whose ancestors were well aware of the characteristics which made it what it is to-day, but whose memories, growing dim with little but hearsay and legend to feed upon, had allowed an impression to ripen that the people of the United States had degenerated into a half-crazed mob of money-getters.

One great war is ended, but the Next War has already begun, although it has hardly as yet acquired appreciable impetus, comparatively speaking. The Next War will be a commercial war, in which the dye industry will play no small part.

In this branch of operations, the struggle will without doubt be fought out between the United States and Germany for the mastery of the South American and Far Eastern markets. But little else remains which is not already taken care of by England, Switzerland and other countries; embargoes and restrictive legislation are the order of the day and have become the principal weapons of those who desire to make the future of their dye industries secure. The belief prevails that Germany is ready to supply the world again with all the colors which she formerly did, and on an instant's notice. But such, however, is not the case, and contrary to many reports, some months must elapse before she will be able to put up the battle which she hopes to give.

One thing is certain: There will not be room for both Germany and the United States, working at full capacity, in the dye markets of the world. One or the other will have to greatly alter her present plans. But another thing is equally certain, namely, that with the approach of the Next War, the United States is ready—ready to a degree which will surprise not only Germany, but those customers who put their faith in her dye chemists and manufacturers.

With a capital of $100,000 the Seneca Textile Corporation has been incorporated under the laws of New York to manufacture textiles. Headquarters of the concern will be located in New York City, and the incorporators consist of L. I. Rhodes, I. Garten and S. F. Katz.

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THE GRAFT INVESTIGATION

It has been brought to our attention that during the past week or ten days certain manufacturers of and dealers in dyestuffs have received from the Federal Trade Commission a lengthy questionnaire, the purpose of which is to put the Commission in possession of information which it is hoped will assist them in locating corrupt commercial practices in the dyestuff field.

Apparently this questionnaire has been sent only to comparatively a few of the dealers and manufacturers in the United States, and as we have not as yet been able to secure a copy for personal perusal we must refrain from commenting at any length upon its nature until a later issue. We are informed, however, that the questionnaire is of considerable length, and that the complete answering of the inquiries contained therein involves the disclosure of the most intimate details of the recipient concern's business.

If we are correctly informed as to the nature of the questionnaire, it would seem that a great deal of arduous clerical labor were being imposed upon many undoubtedly innocent parties and that a most complete revelation of each individual firm's business and methods were being asked for.

The REPORTER has consistently, from its very inception, advocated a governmental policy which would tend to suppress graft in the dyestuff industry. It is very well known that in pre-war times commercial bribery was indulged in, in one form or another, by nearly all of the dyestuff distributing agencies in the United States. We are of the opinion that a very pronounced change in this condition has taken place during the last few years, and we believe that at the present time graft—although it still, unfortunately, exists—is now the marked exception instead of the rule. Practically all of our leading American manufacturers have come out flat-footedly against the practice, and we have no reason to doubt the sincerity of their assertions that they do not tolerate practices of this kind in any form.

But despite the fact that this matter has been given a great deal of publicity and has been the subject of much discussion wherever leaders of the dyestuff industry have met, there can be no doubt that the practice still exists in numerous cases, and it is our opinion that it will continue so to exist until something more than words is used against it. It is our belief that only convictions with severe penalties attached thereto and unsparing publicity for these convictions when obtained will be able effectually to eliminate the practice.

Whether or not the questionnaire above referred to will be of any marked assistance in this direction we doubt. It is hardly to be expected that any concern really guilty of these practices would answer questions in such a way as either directly or indirectly to incriminate itself, and it is certain that it will throw a great deal of onerous labor upon many innocent concerns and compel them to disclose —possibly to their competitors—facts in regard to their business and their relations with their customers which it would seem to be unreasonable for even a governmental body to require.

However, it may be that the end justifies the means. Surely all right-minded persons are of one accord as to the advisability of the elimination of commercial bribery in our industry, and if the present method is really of service to this end we should all accept it in the proper spirit and cooperate to the best of our ability.

One thing, however, is self-evident

—there should be no favoritism shown if an investigation of this sort is to be undertaken. If any concern is asked to answer this questionnaire, then, certainly, all should be so asked. At the time of writing this editorial we have inquired of some fifteen or twenty firms as to whether or not they have received the blanks in question, and have found that in a majority of cases they have not. This is manifestly inequitable and should be corrected at once.

LICENSING SYSTEM FOR DYESTUFFS

The American View

By E. H. KILHEFFER

The matter of protection, or rather the kind of protection, has proven to be a storm center for the present. Everyone seems agreed that protection must be provided for; but shall it be by means of an increased tariff or a licensing system, or both?

In the main, the division is in two groups, namely: the American dyestuff manufacturers on one hand and the various importers on the other. The position of both of these groups is based on reasons which to the interested parties seem good and sufficient. In the first place, the American manufacturer probably possesses a tactical advantage, but besides this I believe he has every right and reason to look for aid from the Government which will help to further establish the industry as a permanent and self-contained one in the United States. The manufacturer does not ask for anything to which he is not by right entitled nor which is unreasonable.

Everyone even remotely connected with the dye or textile industry is entirely familiar with the oft-repeated story of the part played by the dyestuff manufacturers in responding to the need of the textile industry when dyestuff supplies were cut off and this need was a very real one. The response on the part of the dyestuff manufacturers was real also, and, what is often lost sight of, it was a tremendously expensive as well as hazardous undertaking. It may be argued that the profits were enormous also, which made it well worth while, and on this point let me point out that in a considerable number of cases the profits were not anything like what it is commonly supposed they were.

There were firms, it is true, who conducted their affairs in such a way as to realize large profits for a short time, and then quit; but the more serious manufacturers who were building for the future as well as the present did not as a rule make profits any more abnormal than what obtained in practically every industry during the war period.

It is certainly not unreasonable for these manufacturers, then, to want protection which will really protect them during the next period of expansion, which will be tremendously ex-

(*Concluded on page* 12.)

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LICENSING SYSTEM FOR DYESTUFFS

(*Concluded from page 9.*)

pensive if the finer colors are to be produced.

An increase in tariff will help, but it will not give enough protection, one of the very simple reasons being that a tariff increase that would be great enough really to protect would have to be so high as to stand no chance of passing. On the other hand, an increase in tariff rates combined with a licensing system could protect because the licensing commission could be composed of men who really know the situation from all angles and would act accordingly, licensing for import such products as are really needed and not yet produced here, which could then be brought in at an increased but not prohibitive duty.

The dyestuff importers look with apprehension upon the licensing idea, no doubt, because it will apparently limit their business, and undoubtedly also having in mind some of those colors still scarce here they expect easy sailing in the marketing of them. But, after all, the importer has been a distributer only and can easily continue in that role, using colors of American manufacture in his line, along with such imported ones as may be permitted. Outside of reasons founded on patriotism and national pride, the importer has no business reason nor interest why the American dyestuff industry should be permanent; that is to say, his business being one of distribution entirely, it makes no vital difference to him whether he distributes American or foreign colors. My point is that any argument he might advance against the licensing system must of necessity be without regard for the permanency or otherwise of the American dyestuff industry.

I believe that the real serious manufacturers who make up the dyestuff industry in America, as well as a majority of the consumers, are convinced that a licensing system in addition to tariff increase is essential if, as I think we are all agreed, it is desirable to make the dyestuff manufacturing industry in America a permanent one. —*Silk.*

THE APPLICATION OF ALIZARINE

By Dr. Louis J. Matos

The art of applying Alizarine to cotton requires long practice and close observation of many details, and cannot be successfully learned by making a few trials on a small scale. Specifically, the production of the well-known shade—Turkey Red—on cotton is a trade in itself, and the dyer who is skilled in it is always in demand. It is needless to observe that proficiency in dyeing this particular quality of red comes only after a long period of close application to its every phase in the dyehouse, and not by following a recipe alone.

Up to the outbreak of the war Alizarine was a common article on the market, and could be obtained without difficulty; after hostilities began, and imports ceased, then the Turkey Red dyers, and dyers of other Alizarine shades, began to realize to just what extent this country was dependent upon Germany for this product. However, as coal-tar crudes and in-

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termediates were being produced in gradually increasing quantities, the point was ultimately reached where the most essential "crude" for Alizarine production — viz., *Anthracene*— was reached, and at once steps were taken to commence the manufacture of the substance known as Anthraquinone, which was the beginning of the actual manufacture of Alizarine. This latter dyestuff finally appeared about April, 1918, and was shown at the Textile Exhibition of that year in New York and attracted much attention.

Since then the amount of Alizarine produced in the United States has constantly increased in amount, until now it has reached very respectable proportions and is a distinct achievement of the industry of American chemistry.

From the dyer's standpoint the question has been at times raised as to the relative value of the American-made Alizarine in comparison with the standards formerly imported from Germany. Parallel dyeings in the laboratory and large-scale dyeings show that where equal skill and care has been exercised identical results are obtained.

It should not be forgotten that in the upset condition prevalent in many of our dyehouses due to war conditions some inexperienced dyers undertook to dye cotton with domestic Alizarine and failed, and without going into the real causes of non-success at once charged their defective results to imperfectly made Alizarine instead of to lack of skill in dyeing cotton with that particular dyestuff. It is a fact that some of the earlier batches of American-made Alizarine were not perfect, but it is also a fact that some of these same defectively made batches did yield excellent shades of Turkey Red of superior fastness when dyed by a skilled workman, a man who knew Alizarine and how to work it.

The old method of dyeing Turkey Red on cotton has been handed down from the days when "ground Madder" was used for the true shade, and except for several minor changes, based on the personal experience of each dyer, it remains about the same wherever practised. It is a long process, but, like all shades requiring the use of dyewares having a heavy chemical molecule to produce, it is well worth the time. Indeed, the longer the time the denser the color compound on the cotton becomes, and as a natural consequence the final fastness of the shade. The general sequence of operations for dyeing a true Turkey Red is as follows:

The cotton is boiled for about one and one-half hours in Caustic Soda and finally washed and dried. It is then ready for mordanting, which is done by working in a solution of Turkey Red Oil, made with 40 gallons of water to 5 gallons of oil. Wring the skeins well and hang in the drying box for six to eight hours at 110 to 115 deg. Fahr. Pass through a bath of Acetate of Lime, standing at 6 to

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8 deg. Tw., and again dry. This Acetate of Lime treatment is the foundation of a good fast red, and if it is not mordanted at this stage properly good results will not be obtained. After coming from the dry box, the yarn is "chalked" for about one hour in a batch containing 10 pounds of chalk, kept in suspension by agitating, and heated to 140 deg. Fahr., after which it is washed well to remove all free chalk particles. This is also very important, since any loose chalk mechanically adhering to the cotton fibers is a sure cause of lack of fastness to rubbing. From the chalk bath the yarn goes to the dye bath, which is prepared with about 8 per cent of Alizarine (dry basis), 3 per cent Turkey Red Oil and 1 per cent Sumac (or equivalent of Tannic Acid). Dyeing begins cold, but the temperature is gradually increased to 150 deg. Fahr. and maintained at this temperature, or at most 160 deg. Fahr., for half an hour. Lift the yarn, whiz, and dry without excessive heat. After dyeing, the yarn is steamed for one hour at 25 pounds' pressure. Soaping is the last operation. The steamed yarn is usually soaped in a kier under low pressure with 3 per cent of soap fortified with a small amount of Sal Soda, and to which some dyers add a small amount of tin crystals, seldom exceeding 1 per cent.

Cotton subjected to this process is thoroughly dyed, and if the final wash is well done the resulting color is full and rich and will not crock.

As previously observed, there are many modifications of the dyeing process. Some of the practical processes are outlined below; one in current use being the following, and based upon the use of Alizarine in paste form, the condition in which it is most desired by users.

The yarn is first well boiled out. It is then saturated with Turkey Red Oil (50 per cent grade) diluted in the proportion of one part oil with eight parts water. The yarn is then dried, and the oiling and drying are repeated for a second and a third time. After the final drying, it is steeped in a cold 4 deg. Tw. solution of alum for five minutes and then rinsed. Hard twisted yarn requires a longer immersion.

In the meantime the dye bath is prepared by adding successively: Alizarine N A C 20 per cent paste, 12 per cent.; acetate of lime, 1 per cent; tannic acid, 2 per cent; acetic acid, ¼ per cent.

Dyeing starts at ordinary temperature, but is gradually raised to 180 deg. Fahr., dyeing progressing at that temperature for one hour. Afterward the yarn is washed, dried and steamed for two hours at a pressure of 25 pounds and finally soaped. Repeated steaming and soaping increases the brilliancy of the shade. Yarn dyed by this process resists light and most severe washing, together with the ordinary laundry bleach, and in consequence is much employed for towel headings and yarn for tablecloths.

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Regarding Alizarine dyeing in general, it is of the utmost importance that iron as an impurity should not contaminate the work at any stage, since Alizarine is an adjective coloring matter and readily forms iron compounds, which tend to dull the shade.

Cotton printing with Alizarine is a separate branch of the art, but a few notes upon it may not be out of place. The well-boiled-out cloth, properly bleached, is padded in a warm solution of Turkey Red Oil prepared in the proportion of 3 gallons of the oil in 100 gallons of water, and to which a sufficient amount of ammonia has been added to clarify it. The cloth is then dried.

An acid starch paste is prepared for printing, compounded as follows: Cornstarch, 20 parts; water, 70 parts; acetic acid, 7 parts; stearic acid, 1 part; cottonseed oil, 2 parts. The starch is made into a cream with the water, then slowly heated in a steam jacketed kettle, with the gradual addition of the other ingredients in the order named, and stirred to a smooth consistency.

A tragacanth paste is made by soaking for twenty four hours 6½ parts of gum tragacanth and 93½ parts of water. Then boil with constant stirring for two hours and strain to remove lumps.

When preparing the printing color take 100 parts of acid starch paste and 50 parts tragacanth paste and mix well.

Preparation of the Alizarine printing color: Mix thoroughly 8 parts of Alizarine N A C 20 per cent paste with 78 parts of acid starch (tragacanth paste); then add 4 parts of acetate of lime, 27 deg. Tw.; 4 parts of oxalate of tin, 22 deg. Tw., and 6 parts of sulphocyanate of alumina, 20 deg. Tw. When mixed and strained it is ready for printing.

After printing the cloth it is steamed for one and one-half hours at 10 pounds' pressure in a cottage steamer, after which the cloth is run through a cold-water wash, followed by the usual soaping in an open soaper at the boil. Finally rinse and dry.

Of course, there are modifications of this process, based upon the individual practice of various color mixers and printers, but the basic facts are given in the formulas above. The use of Sulphocyanate of Alumina marks one of the distinct improvements in the Alizarine printing process, doing away with the use of the older and uncertain basic alumina salts.

The preparations of the Oxalate of Tin solution and that of the Sulphocyanate of Alumina was formerly done by the color mixer himself, but more uniform products may be procured directly on the market from chemical manufacturers.—*Textile World Journal.*

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INQUIRY DEPARTMENT

All classes of chemical work or advice relating to artificial colors, natural dyestuffs, dyewoods, raw materials, extracts, intermediates, crudes, or dyeing chemicals and accessories in general, will be carried out for readers and subscribers of the AMERICAN DYESTUFF REPORTER by this department.

Inquiries of a minor character will be answered on this page, while major matters involving personal investigation, analyses, perfected processes and working formulas, will, if desired, be treated confidentially through the mails. All questions, materials for analysis or letters leading to the opening of negotiations for special work will receive prompt attention if addressed to Inquiry Department, American Dyestuff Reporter, 470 Fourth Avenue, New York City.

E. H. M.—Question: We are using the following formula for dyeing children's ribbed hosiery, weighing 28 ounces on 9s made of 11s carded yarns, and are having some trouble at times with tendering them:

Barrel No. 1—65 pounds muriatic acid, 65 pounds aniline oil, and water 100 gallons.

Barrel No. 2—22 pounds chlorate soda, 15 pounds alum, 2 pounds blue stone, and water 100 gallons.

We use equal quantities from each barrel and dye 1,500 to 1,600 pounds from each mixing of the two barrels together.

Perhaps you could give us some information which might help us out of our trouble.

Bosson & Lane

Manufacturers of

Sizing and Finishing Products for Cotton, Woolen and Worsted Goods

VICTOR OIL for cotton warps

SOLUBLE WAX—Scotch Size

Works and Office: Atlantic, Mass.

Answer: There is nothing radically wrong with the formulas you are now using. In dyeing with aniline oil a certain amount of tendering is bound to result because of the oxidizing process involved. The best suggestion we can make to you is that the oxidizing must be done very carefully, and that this is, for the most part, a problem which the individual buyer must work out for himself; particularly the drying must be done slowly and at a not high temperature. Any effort to rush the goods through the dryer is bound to result in an increase of tendering.

As a matter of fact, nearly everyone recommends sulphur blacks as preferable to the aniline oil process, even on heavy ribbed goods, and it is our opinion that you would find that by the use of sulphur black you would get an equally satisfactory color and at the same time obviate any tendering of the fibers.

T. T. A.—Question: Could you advise us the most modern and efficient system of rendering unshrinkable woolen underwear fabrics? Who would install such a system, and, likewise, who, if anybody, has patented such a process or methods?

Answer: So far as we know there is no process which is at all efficient for this purpose. A loosely twisted yarn such as is used in woolen underwear is bound to shrink to a certain extent, no matter what you do with it, and the only suggestion we can make is that great care should be taken in the washing of these goods. It is, we believe, the general practice to knit up these garments "in the grease" and to wash them after their completion, making due allowance for shrinkage in this process. Only the use of a pure soap, absence of rubbing and care not to have the water at too high a temperature will assist in keeping the shrinkage down.

SCOTTISH DYES, LTD., TO BE FACTOR IN INDUSTRY

According to the "Trade Supplement of the London *Times*," the Scottish dye industry has made important progress as the result of the formation of Scottish Dyes, Ltd. An extensive site of about eighty acres has been acquired at Grangemouth, on the Firth of Forth, not far from Edinburgh. It takes over all the plant and processes developed by Solways Dyes, Ltd., an outgrowth of Morton Sundour Fabrics, Ltd. This company commenced to make a few vat dyes for their own use and gradually extended the manufacture until it became advisable to separate the dye-manufacturing works from the parent company. So far, however, Solway Dyes Company has mainly put its output at the service of the Morton concern.

The new works will be on a large scale, and with excellent transport facilities—sea, canal and rail—it will be able to offer these important fast dyes in the general markets. In the immediate future the manufacture will be confined to the vat dyes, the possibilities of the anthraquinone series by no means being exhausted; but later fast colors in other classes will be manufactured.

In 1913 nearly 600,000 pounds of vat dyes were imported, and there has been a constant appeal from an important branch of the cotton-dyeing industry for these and other specially fast dyes. The company will have its share of the Parliamentary grants for the development of the dye-making industry. At present all operations will be directed from Carlisle, and James Morton has been appointed chairman of the new company. The new development will not affect the work at Dentonhill, the headquarters of Solway Dyes, for some time to come, but it is understood that all extensions of the Morton dye-making activities will be on Scottish soil.

The British Chemical Association has now about 100 members, and although it commenced its corporate existence in March this year it has already done useful work. The first annual meeting was held recently, with William Mann, the president, in the chair. A local sub-committee has been formed in Manchester, and an alkali and Allied products committee has also been formed. Certain grade objections to the method of licensing the importation of dyestuffs have been urged in these columns. This method has obliged importers and consumers to disclose their business, but according to information received by the association the mischief went further than this. The Chemical Trade Association has taken up the matter energetically with the Dye Commission, and it has received a satisfactory assurance.

The Verona Chemical Company, Verona Avenue, Newark, N. J., has had plans prepared for alterations and improvements in one of the buildings at its plant, to facilitate operations.

Frank Hemingway, Inc.

115 Broadway, New York

Dyestuffs Intermediates

PHARMACEUTICALS
HEAVY CHEMICALS

Victoria Blue B and Base
Crystal Violet Conc. and Base
Malachite Green Crystals
Auramine O and OO
Methylene Blue 2 B
Methyl Violet 4 B
Direct Fast Pink
Direct Fast Rose
Safranine Y S
Eosine B and G
Fuchsine

NOTES OF THE TRADE

To manufacture silk and other textile fabrics, the Hamilton Silk Dyeing Company has been chartered under the laws of New Jersey with a capital of $125,000. The headquarters of the new company will be in Paterson.

To export and import crude raw drugs, W. Benkert & Co., Inc., has been incorporated with a capital of $25,000 under the laws of New York. The incorporators are W. Benkert, H. J. M. Monsanto and W. A. Marden. Head offices will be in New York City.

With a capital of $3,000,000, J. Samuels & Bros. have been incorporated in New York State to manufacture clothing and textiles. Offices of the new company will be in Manhattan, and the incorporators are J. Samuels, E. Samuels and Ives Samuels.

To manufacture textiles, the Cambridge Silk Mills, Inc., have been incorporated under the laws of New York with a capital of $50,000. Offices of the concern will be in New York City, and the incorporators consist of A. Schultz, J. Schultz and A. Schultz.

Under the laws of New Jersey the Orange Hosiery Mills have been incorporated with a capital of $25,00 The business of the new concern wil be the manufacture of silk and othe textile fabrics, and offices and work will be in Orange, N. J.

To manufacture chemicals and dyestuffs, the Allied Chemical Compan has been incorporated under the law of Delaware. The capital of the com pany is $3,000,000, and headquarter yill be located in Wilmington.

Plans by the Westmoreland Chem ical & Color Company, of Philadel phia, for the construction of a three story brick administration building are rapidly going forward. The con tract for the new structure has al ready been let, and the cost will be i the neighborhood of $20,000. Th building will be in Chestnut Stree Philadelphia.

Announcement has been made tha the Anthrakone Dye Products and Chemicals Company has taken ove the business of the Globe Chemica Company, of New Jersey, and wil conduct the manufacture of anthra quinone as well as the series of va colors derived from this intermediate The offices of the Anthrakone Com pany are at 1834 Broadway, New York City.

To manufacture colors, dyestuffs, textiles and other products, the North American Industrial Transatlantic Company has been incorporated un der the laws of New York with a cap ital of $50,000. The incorporators are R. Illowy, D. X. Lewis and A. Ga briel, and headquarters will be in New York City.

The Morgan-Long Chemical Compa py, Los Angeles, Cal., has been incor porated with a capital of $100,000 to operate a plant for the manufacture of chemicals and allied products. E. J Morgan and A. J. Churchill, Los An geles, and C. D. Long, Ocean Park, are the incorporators.

JENNINGS & COMPANY, Inc.
DYESTUFFS
93 Broad Street **Boston**

R. Lechner Co., *Inc.*
Specialists in Dyestuffs, Dyewood Extracts, Etc.
200 Fifth Avenue **New York**

AMERICAN MADE

DYESTUFFS and INTERMEDIATES

Diethylaniline
Napthionic Acid
Neville Winther Acid
R. Salt
Schaeffer Salt
Bayer Salt
Broenner Acid

ANILINE DYES & CHEMICALS, *Inc.*

Cedar and Washington Streets, New York City

BOSTON CHICAGO PHILADELPHIA COLUMBUS, GA

TO IMPORTERS

of DYESTUFFS IN FOREIGN COUNTRIES

IF YOU are desirous of establishing relations with American Dyestuff Manufacturers; if you would like to secure exclusive agencies for your territory; if there are any special colors of which you are in need or any particular information about American Dyestuffs which you desire — then write us and we can help you. Our service is gratis.

AMERICAN DYESTUFF REPORTER

15 PARK ROW NEW YORK CITY

H. A. METZ & CO., Inc.

122 Hudson Street
New York, N. Y.

American Made Products

Dyestuffs, Colors, Intermediates, Sizing and Finishing Materials, Etc.

Dyestuffs Colors Sizing and Finishing Materials	*Produced by*	Consolidated Color and Chemical Co. Newark, N. J.
Dyestuffs and Intermediates	*Produced by*	Central Dyestuff and Chemical Co. Newark, N. J.

BOSTON, 130 Oliver Street
PHILADELPHIA, 132 Chestnut St.
PROVIDENCE, 23 S. Main Street
ATLANTA, 1418 Empire Building
CHICAGO, 317 Clark Street
SAN FRANCISCO, 20-22 Natoma St.
CHARLOTTE, 210 South Tryon Street